

the fact that the absorption of dead bone is determined by the pressure to which it is subjected. In working at the matter, of course he had thought of the nature of the influence thus exercised, but he did not consider any opinion which he might have formed on the subject worth expressing. The question was not in relation to the absorption of bone, whether living or dead, but to the effect of pressure on the absorption of dead bone. With respect to the case Mr. Solly mentioned, it was not enough to show that dead portions of bone bore evidence of having been partially absorbed: it must be shown that such absorption occurred after the death of the bone, and thus independently of all pressure. Mr. Savory defended the use of the word "absorption." He had not employed the term without foreseeing the objection that might be urged against it; and so he had been careful to relate how, in some of the experiments, the wounds at once closed, and completely healed without any discharge or other means by which disintegrated fragments of bone might have escaped. Moreover, if the preparations were examined it would be seen that, in some of them, the portions of dead bone which had been removed could not have escaped, for the holes were tightly plugged by the pegs which had been driven in. With reference to the destination of the bone which disappears in disease, Mr. Savory thought that the evidence advanced to prove that this is always disintegrated and cast out, was unsatisfactory and inconclusive. Of course, in some forms of ulceration of bone, as in phagedenic ulcers of soft parts, disintegrating fragments might perish and escape; but in other less destructive forms of ulceration bone might disappear through absorption. Much had been made of the fact that the discharge from carious bone contains an unusual abundance of phosphate of lime, this being supposed to represent the dissolved osseous tissue. But while, on the one hand, this would prove too much, the proportion of bone which disappears not being equal to the quantity of phosphate of lime discharged, on the other hand, a better, a more philosophical explanation of the fact might be given. As in health each part assimilates to itself from the blood its own proper constituents, so in abnormal forms of nutrition it was reasonable to believe that the material furnished by different structures would present characters of composition more or less corresponding with those of the tissue whence it proceeded. Be this as it might, however, in some at least of the experiments described there was no means by which the portion of bone which had disappeared could have escaped externally.—*Med. Times and Gaz.*, March 5, 1864.

30. *Epidemic of Hospital Gangrene, at St. George's Hospital.*—Mr. T. P. PICK gives (*British Med. Journ.*, March 5, 1864) an account of a recent epidemic of phagedæna at the above named hospital.

He states that in no case was any constitutional fever observed, which might lead one to suspect the advent of phagedæna, before the local symptoms manifested themselves. The only premonitory sign which he observed was, in some cases, a total cessation of pain twenty-four hours prior to the attack; but this was by no means constant, and could not in any way be relied upon.

"The constitutional symptoms, when they did appear, which was for the most part about the second or third day, were inflammatory in the first place, but quickly subsided into irritative fever, especially characterized by an extremely rapid and weak pulse.

"The local symptoms presented themselves in two perfectly distinct forms, which, for the sake of clearness and distinction, may be designated the gangrenous and the ulcerative.

"When a wound, which has been previously healthy, is about to take on the gangrenous form, it becomes dry, and, losing its florid colour, becomes of an ashy gray; the surrounding parts are swollen, tumid and tense, of a bright red hue, and present a glossy and shining appearance; the colour soon becomes darker, and eventually black; the ulcer now spreads rapidly, and has a tendency to assume a circular form; the edges become hard, everted, and rugged, and the surface covered with a thick, dark gray or blackish spongy slough, which can only be compared, in appearance, to a yeast poultice. There is great tendency to œdema of surrounding parts, and in some instances, to inflammation of the absorbents, and even the veins. The pain is often extremely severe, of a sharp,

stabbing character, but sometimes it is comparatively slight. The disease may extend, principally, however, confining itself to the skin and cellular tissue, until large surfaces of bone and muscle are exposed; it rarely, however, attacks these structures; vessels may be ulcerated into, and alarming hemorrhage take place. After a time, however, its progress is arrested; upon visiting our patient, we notice a little row of tiny bead-like projections around the margin of the sore, or it may be in one part only; wherever these little granulations, for such I take them to be, are found, we may rest assured that the disease is stopped. Soon, now, the sloughs are thrown off in the form of reddish-brown, or grayish viscid masses, leaving a very sensitive surface, covered with pale, flabby granulations, and it is astonishing with what rapidity these ulcers heal, when there is no bone implicated; they have, however, a tendency to a recurrence of the disease."

The following were the various modes of treatment adopted:—

"*Local Remedies.*—Of these remedies, the one which usually ranks first, and is most highly extolled, is *nitric acid*. We are told that 'the extension of the sore must be stopped by the free application of fuming nitric acid.' If this application did stop the disease, we should be justified in using it; but, unfortunately, it appeared to be perfectly inert to effect this end. In spite of a thorough destruction of the sides and edges of the sore with the strongest acid, the disease still progressed. In one case in which it was used, the edges were destroyed twice, and still the disease continued; and, as it causes excruciating pain, it does not seem to me advisable to use it.

"*Carbolic Acid*, as a remedial agent, has been brought before the profession during the last two years; and two eminent French physiologists, MM. Gratiolet and Lemaire, have made the important observation that, whilst it does not interfere with chemical fermentation, it completely arrests all vegetable and animal fermentations which arise from cryptogamic life. This remedy has been much extolled in checking sloughing and altering the character of ill-conditioned ulcers; and, though it does not appear to have any power of arresting phagedæna, it is an extremely useful application in these cases in destroying the offensive smell of the secretion, and in accelerating the separation of the slough. In several cases, this remedy was applied locally, all general treatment being avoided; and in no one instance was there sufficient evidence to justify one in assuming that it arrested the disease.

"The transfusion of a stream of *chlorine gas* through the ward was tried in one or two instances, though not sufficiently often to establish any definite result. On August 6th, there were three cases of phagedæna in the Fitzwilliam Ward of this hospital. They were of different duration, and were all spreading, though in one there was some slight tendency to arrest. A gentle stream of chlorine gas was passed through the ward for eighteen hours, at the end of which time the phagedæna was arrested in all three cases. A man, having undergone amputation, was placed in a separate apartment. Two days after, he was attacked with phagedæna, which rapidly extended. A stream of chlorine was passed through the ward, and in forty-eight hours the disease was arrested. Though these facts are satisfactory, they are not conclusive, and are far too meagre to arrive at any just conclusions. Whether this remedy has any control over the disease, or not, there is no doubt that it must act beneficially, if in no other way, at least in destroying the disgusting effluvia, which it does in a pre-eminent degree, and is thus especially useful, particularly in hospitals, where so many sick are collected together in one room.

"*General Remedies.*—There is no doubt that *opium* is our sheet-anchor. After watching the wonderful effects of this drug, not in one or two cases, but in dozens, and after every other conceivable remedy had been tried and failed, I am confident that, if there is such a thing as a specific, opium is a specific for phagedæna, if properly administered, and in sufficient quantities. I have never seen it fail. The most obstinate case was that of William W., whose history is given above. He took laudanum in gradually increasing quantities for fifteen days, till at last he was taking nearly half an ounce in the twenty-four hours. This, however, subdued the disease. But this must not be regarded as a typical case. Instances have been seen in which a rapidly spreading sore has presented

a perfectly clean and healthy surface under twenty-four hours' treatment by opium; and two or three days may be generally considered as ample time to stop the most rapidly spreading sore.

"*Chlorate of Potass.*—This remedy, from its known properties in checking unhealthy and gangrenous ulcerations, was largely tried in phagedæna, and with some amount of success; for, though it did not appear to arrest the disease, at all events not with the same certainty as opium, still it appeared to act beneficially in the cleaning of sores and the separation of sloughs; and, from a knowledge of its properties, it was supposed that it might act as a prophylactic and prevent a recurrence of the disease, and was accordingly prescribed largely.

"*Ammonia* possesses no power over the disease, but was often a necessary addition, on account of the very rapid prostration and the great deficiency of nervous power which is often observable in these cases.

"Dr. Polli of Milan has lately introduced a class of medicines before the profession, as having the power of arresting putrefactive fermentation; viz., *sulphurous acid*, in combination with potass, soda, and lime. These remedies were tried in phagedæna; and the drug did not appear to exert any influence. It was given in several cases, and in no one instance was the slightest benefit obtained.

"The treatment, then, that has been adopted during the late outbreak, has been in the main opium, sometimes combined with ammonia or chlorate of potass, at other times alone; and a liberal diet. And, whatever may be the result of treatment in other epidemics, there is no doubt that, in the one under consideration, this plan was followed by the best results; in fact it was the only one which really subdued the disease. Of forty-seven cases of which accurate records are kept, the average time which the opium took to subdue the disease was forty-eight hours, the shortest being twenty-four hours."

31. *Syphilitic Lesions of Internal Viscera.*—The affections of internal organs arising from syphilis have, during the last few years, been receiving considerable attention from pathologists in this country and on the continent. M. Lancereaux, *chef de clinique* in the Paris Faculty of Medicine, has lately published the results of some researches on the subject in which he has been engaged since 1858.

The lesions, he says, produced in the viscera by syphilis present in general sufficiently well defined characters to allow of their cause being specified. They may be grouped under the following forms: 1. Interstitial inflammation. 2. Gummata or Tumours. 3. Cicatrices.

Those organs, such as the liver and testis, which abound in parenchyma, are most liable to the first named of these forms. New elements (nuclei, cells, and fibres of connective tissue) are developed in the meshes of the organ, producing enlargement, and ultimately contraction and atrophy. When this takes place the surface of the above-named glands presents furrows and depressions of greater or less depth, giving a characteristic appearance to the organ. In the liver we find lobular cirrhosis, *i. e.*, *cirrhose à gros grains*, as M. Lancereaux calls it—a state very different from the granular induration of drunkards, or *cirrhose à petits grains*. The inflammatory form is less distinct in the other viscera, as the brain, kidneys, lungs, and heart; and is also more difficult of recognition—that is, when one organ alone is apparently affected. In these organs it manifests the characters of cerebral induration or softening, of interstitial nephritis, or of chronic pneumonia or carditis.

The second form of visceral syphilis is characterized by the presence of tumours varying in size from a pea to a haricot bean, and generally termed *gummata* or gummatus tumours. They may be firm or soft in consistence, and of a gray, whitish, or yellowish colour, according to their age and to the relative proportions of their histological elements. They are ordinarily surrounded by a dense grayish vascular fibrous tissue, very resistant to the finger; this forms a kind of cyst from which they may sometimes be enucleated, and its presence is often a sufficient guide in distinguishing these tumours from tubercle, cancer, and most other non-syphilitic new formations. Gummata in their early stage are constituted of the embryonic elements of connective tissue. Having arrived